T E C H N I C A L M E M O R A N D U M

Utah Coal Regulatory Program

February 18, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor

THRU: James D. Smith, Senior Reclamation Hydrologist/Team Lead

FROM: Dana Dean, P.E., Senior Reclamation Hydrologist/Inspector

RE: 2004 Midterm Review, Canyon Fuel Company, LLC, Soldier Canyon Mine, C/007/0018, Task ID #2126

SUMMARY:

The Division initiated a midterm review of the Soldier Canyon Mine via correspondence with Mr. Rick Olsen of Canyon Fuel Company on October 22, 2004. The letter outlined the following elements as those selected for review:

"1. An AVS check to ensure that Ownership and Control information is current and correct.

2. A review to ensure that the Plan has been updated to reflect changes in the Utah Coal Regulatory Program, which have occurred subsequent to permit approval (One area of emphasis is to ensure compliance with the U. S. Fish and Wildlife Windy Gap Process).

3. A review of the plan to ensure that the requirements of all permit conditions, division orders, notice of violation abatement plans, and permittee initiated plan changes are appropriately incorporated into the plan document.

4. A review of the applicable portions of the permit to ensure that the plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.

5. A review of the bond to ensure that it is in order and that the cost estimate is accurate and is escalated to the appropriate year dollars

6. *The Division may conduct a technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness of operational, reclamation, and contemporaneous reclamation practices.*"

Division representatives conducted a site visit on October 23.

The Division sent a deficiency letter to the Permittee on January 6, 2005. The Permittee responded to the deficiencies on January 13, 2005.

This memo addresses items 1, 3, and 4 in the above list.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

Arch Coal Corporation obtained full ownership of Canyon Fuel Company in the fall of 2004. While making the required changes in the ownership and control information, they decided to have a "General Chapter 1." This Chapter 1 contains all of the required ownership and control information, and is valid for all Canyon Fuel Company mines. This will simplify the process of keeping the ownership and control information updated for each of the mines. The Division notified the Permittee of final approval of the "General Chapter 1" on February 11, 2005.

Findings:

Identification of Interests Information meets the minimum requirement of the regulations.

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

The Soldier Canyon Mine does not have any outstanding Notices of Violation (NOV). The AVS system does not show any of the following for Canyon Fuel Company:

- State or Federal Permit suspension or revocation,
- Bond or other security forfeiture in the last five years,
- Any unresolved State or Federal violations received within the last three years, or
- Any outstanding, unresolved violations.

Findings:

The Permittee has complied with the Violation Information section of the regulations.

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

The plan contains commitments to use the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area. BTCA means that the operator is employing the best methods available at any one time. The Soldier Canyon MRP contains the following commitments to BTCA in controlling sediment.

Water-Quality Standards And Effluent Limitations

The mine has a current Utah Pollutant Discharge Elimination System (UPDES) Permit, which it is abiding by. The current permit was issued on May 1, 2003 and expires April 30, 2008. The permit allows for a total dissolved solids (TDS) discharge of 1200 mg/l or 5 tons per day (tpd) as daily maximums.

There are three point-sources covered under the UPDES Permit; UT0023680-001 (MW-1 mine discharge), UT0023680-002 (sedimentation pond), and UT0023680-003 (MW-2 mine discharge).

MW-1 has not discharged since December of 1991. The maximum pounds per day of TDS ever discharged from this point were 2620 (1.31 tpd).

MW-2 has not discharged since May of 1998. The maximum pounds per day of TDS ever discharged from this point were 9440 (4.72 tpd).

The sedimentation pond has never discharged.

Canyon Fuel Company has met the requirements of the UCMR by keeping point-source discharges within the UPDES limits.

Sediment Control Measures

The Permittee uses a series of culverts and ditches to divert all runoff from the undisturbed area away from the disturbed area to prevent excess sediment contribution from the disturbed area. The sedimentation pond treats all runoff from the disturbed area, except in nine small areas where the Permittee uses alternative sediment controls.

Siltation Structures: Sedimentation Ponds

The sedimentation pond for the disturbed area is located across the county road and slightly to the south of the mine office building. The Permittee designed the pond to contain all runoff from the disturbed area for a 10-year, 24-hr. storm event, with 0.27 acre-feet extra capacity. The cleanout level for the pond is at least 2 feet below the decant level, as required by the Division of Water Quality. The outfall of the pond is rip-rapped.

Siltation Structures: Alternative Sediment Control Areas (ASCAs)

To control sediment in areas that do not report to the sedimentation pond, the Permittee currently has nine approved Alternative Sediment Control Areas (ASCAs). The ASCAs account for a total of 4.9 acres of drainage area as discussed below.

ASCA #1 – REI Storage Area

The REI storage area was formerly used by Resource Enterprises, Inc. (REI) to store equipment and small parts. The area is 0.42 acres in size and is located immediately southwest of the sedimentation pond (Figure 7.42-1). Sediment control measures used in this area include:

- Gravel placed on entire storage area, including access,
- A berm on the down-slope side of the area, directing all runoff to a channel,
- Revegetation of the topsoil pile from the area,
- Straw bales along the southern end of the topsoil pile,
- Cobble size stones lining the channel, and

- Straw bales to treat the runoff from the channel where it connects to the natural drainage.

ASCA #2 – Parking Lot Outslope

The parking lot east of the mine office building was constructed before SMCRA was passed. The outslopes do not report to the sediment pond, therefore alternative sediment control is practiced. This area includes 0.27 acres. Sediment control measures in this area include:

- Vegetation,
- Rip-rap, and
- High-infiltration soils.

ASCA #3 – No. 2 Exhaust Fan Site

The No. 2 exhaust fan site, approximately 1,200 feet north of the mine office building, has a total area of 0.35 acres. Sediment control measures in this area include:

- A vegetation test plot (0.06 acres),
- Gravel covering the entire area (except the vegetation test plot),
- A small drainage ditch to separate the site from the county road (gravel-lined), and
- Straw bales around the end of the fan exhaust stack and at the point of lowest elevation.

ASCA # 4 – Disturbed Area North of Fan No. 2

This area is 0.02 acres. Sediment control measures in this area include:

- Reseeding of the entire area,
- An erosion blanket placed over the surface, and
- A small berm at the top of the slope to prevent runoff from entering the area.

ASCA #5 – Portal Bench Disturbance

This area includes the portal bench and the outslope of the bypass culvert that runs between the mine office building and the portal expansion area. The area is 0.43 acres. Sediment control measures in this area include:

- Rip rap in some areas,
- Revegetation, and
- Mulching.

ASCA #6 – Sewage Lagoon Outslopes

The sewage lagoon is located approximately 2 miles south of the mine office building. It is a total containment sewage lagoon system and all disturbed area drainage for the lagoon,

except the outslopes, is designed to be contained in the lagoon. The outslopes have an area of 0.46 acres. Sediment control measures in this area include:

- Vegetation of the outslopes, and
- Rip-rap/gravel on top of the embankment.

ASCA #7 – Topsoil Storage Site

The topsoil storage site is located approximately 2.5 miles south of the mine office. It contains topsoil piles for the Soldier and Dugout Canyon Mines. The site includes 2.30 acres. Sediment control measures in this area include:

- Diversions to keep undisturbed runoff from entering the site,
- Berms around the topsoil piles,
- Vegetation,
- Straw bales and/or silt fences along the ancillary road, and
- A fence to prevent unauthorized access and unwanted disturbance.

ASCA #8 – Bypass Culvert Inlet
This area is 0.04 acres and has been rip-rapped to control sediment.

ASCA #9 – No. 3 Fan Exploration Road

This road begins approximately 300 feet north of the No. 2 exhaust fan facility and continues to the north for about 675 feet. There are 0.61 acres in this ASCA. Sediment control measures in this area include:

- Extreme roughening (pocking and gouging),
- Fertilization,
- Seeding, and
- Mulching.

The nine ASCAs, as discussed above represent the Best Technology Currently Available (BTCA) in controlling sediment in areas that do not report to the sedimentation pond.

Findings:

The 9 ASCAs, as discussed above, represent the Best Technology Currently Available (BTCA) in controlling sediment in areas that do not report to the sedimentation pond. The sedimentation pond represents BTCA for controlling sediment in the rest of the disturbed area.

SPECIAL CONDITIONS OR STIPULATIONS TO THE PERMIT APPROVAL

Regulatory References: 30 CFR773.17; R645-300-140; R645-300-145.

Analysis:

The Division issued the current permit on February 3, 2002. It expires February 3, 2007. There is one stipulation attached to the permit; that Canyon Fuel Company submits water monitoring data for the mine **electronically** through the Division's Electronic Data Input (EDI) page at http://linux1.ogm.utah.gov/cgi-bin/appx-ogm.cgi. The Permittee has complied with the stipulation by submitting the data electronically.

Findings:

The Permittee has complied with the Special Conditions or Stipulations to the Permit Approval section of the regulations.

RECOMMENDATIONS:

The Division should approve the review.

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